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Councils Corner

By Hannel Ham

The SAIF is a non-profit organisation that was established to serve Forestry professionals. Its inaugural meeting was held in Pietermaritzburg on 17 May 1968 and was attended by 49 Foresters. On 17 May 2017 the SAIF will celebrate its 49th birthday with 395 members.

Finances are healthy and we received a clean financial audit in July 2016. In order to uphold the service to our members, council increased membership fees with only 5.5% for 2017/2018 (effective 1 April 2017).

The past year the council have continued to serve the members of the SAIF and the Forestry industry. There was only one change to council with Nico Monnig stepping down as chair of the Mpumalanga branch. I would like to thank Nico for taking the time to represent the SAIF. Schalk Jacobs was elected as new chair (effective 1 April 2017). He is full of energy and I want to encourage the Mpumalanga members to assist Schalk.

Council members are working pro bono (voluntary), but meet three times a year to attend to SAIF matters and strategic decisions aimed at improving our offering to members. Some of our latest initiatives include:

- Andrew McEwan is driving the development of the Continuous Professional Development Membership. This will be coupled with a web-based member database that can be updated by members. Hannes van Zyl is assisting in his capacity as webmaster.
- Corine Viljoen is steering the new electronic membership certificate initiative. She is also the go-to person for corporate clothing. If you are interested, please contact her at saif@mweb.co.za.
- Sally Uphold is responsible for printed media. This includes new handbooks and communication between council and the Chief Editor (Andrew Morris) of Southern Forests: a Journal of Forest Science. Sally and Andrew are committed to present the electronic submission system of the journal in the near future. Two new handbooks (Silviculture and Forest Timber Transport) are on the cards for 2019.
- The photo competition for the 2018 calendar will start soon. Andrew McEwan will publish details in the newsletters. The 2018 calendar will commemorate the 50th birthday of the SAIF.
- All branch chairs are committed to have active social media interaction. More details will be presented at the general and branch AGM's.

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- Council is still committed to the scientific members and communication between the SAIF and SACNASP. The process of registering Forestry as a separate discipline is in the final stages.

The SAIF is only as strong as its member's commitment. I want to encourage members to send any questions, complaints, compliments or suggestions to Corine (saif@mweb.co.za). Please visit our website (<http://saif.org.za>) regularly for updates. You are also welcome to send new information that we can publish on the website to Corine. I also want to encourage members to update contact details with Corine. The next general AGM will be on 17 July in Pietermaritzburg to coincide with the Science Symposium. Corine will send out more information closer to the time.

And finally, a warm thank you to all the loyal members. You made the SAIF the success it is today!



Fun Facts: Special Gems of Forestry: May 2017

Vachellia karroo (previously *Acacia karroo*): Family Fabaceae (SA no. 208)
Common name: sweet thorn, soetdoring, umuNga, Mookana, Mooka

The generic name '*Acacia*' comes from the Greek word 'akis', meaning a point or a barb. The species name '*karroo*' implies that this species is a principal and most conspicuous tree of the Karoo. Furthermore, *karroo* is one of the old spellings of Karoo, which cannot be changed because of the laws governing botanical nomenclature (giving of names). *Vachellia karroo* is an integrally part of our country's history. It has been used for everything from raft making to sewing needles and fencing for the houses of royal Zulu women. Early naturalists used the thorns to pin collected insects. The common name sweet thorn is from the edible gum, which is exuded from wounds in the bark. *Vachellia karroo* has a life span of 30 to 40 years and is an adaptable pioneer, able to establish itself without shade, shelter or protection from grass fires. It can be found from the Western Cape through to Zambia and Angola, but in tropical Africa, it is replaced by *Acacia seyal*. Although an indigenous tree, *Vachellia karroo* is included in the national weed list of South Africa. It competes for space, water and nutrients with pasture grasses by replacing them.

Habitat: can grow in a variety of habitats from low-lying areas to Highveld (0 to 1 000m.a.s.l.), although not usually found in mist belt and montane areas. It is an indicator of sweet veld with ample water and fertile soils. *Vachellia karroo* prefers a mean annual

temperature of 12 to 40°C and mean annual rainfall of 200 to 1 500mm.

Allergies: Unknown

Growth rate: 3 to 20m tall with a growth rate of 1m per year.

Pollinator: insects and bees.

Wood characteristics: sapwood is white and the heartwood is red-brown with a medium to coarse texture. The heartwood is tough and hard but susceptible to borer attacks. However, the "Dune Forest" variety growing along the coast of KwaZulu-Natal northwards of the Tugela river, has soft wood and not suitable for woodworking.

Uses: bark, leaves and gum are usually used for medicinal purposes. Historically, the gum was exported as "Cape Gum" for making confectionary as it is apparently similar to gum arabic (used as a water-soluble glue). *Vachellia karroo* is frost- and drought-tolerant, but also provides shade and shelter for various animals. A strong rope can be made from the inner bark, while the flowers produce nectar and pollen for bee-farming. Seeds can be used as a substitute for coffee and children can chew the sweet thorns. Wood can be used for fire wood as it burns brightly with little smoke and no odour. The coals are long lasting and ideal for cooking, heating or charcoal. The wood also saws easily, planes to a smooth finish, is moderately durable, and glues and varnishes well for furniture. The Nama people of southern Africa extract a red dye from the bark. This bark contains up to 19% tannins and are used for tanning, giving leather a red colour.

General: In arid areas the sweet thorn is an indicator of water, both underground and surface. It was a very welcome sight to early travellers and nomads. It makes a beautiful garden specimen as the bright yellow flowers are striking against the dark green foliage and black bark. The flowers are sweetly scented and attracts insects to any bird garden. Birds also like to make nests in these thorn trees for protection from predators. Caterpillars of butterflies, club-tailed charaxes (*Charaxes zoolina zoolina*) and the topaz-spotted blue (*Azanus jesous*), are dependent on this tree for survival. The roots are invasive and the *Vachellia karroo* should not be planted near paving, swimming pools or buildings. *Vachellia karroo* is also used for reclamation, nitrogen fixation, intercropping and soil improvement.



Eucalyptus cladocalyx: Family Myrtaceae
Common name: sugar gum

Eucalyptus cladocalyx is endemic to southern Australia and occurs in three disjunct (disconnected) areas. Trees occur in the southern Flinders Ranges towards the top and east of Spencer Gulf, but also on Kangaroo Island and the Eyre Peninsula. It has been planted in South Africa since the mid 1800's for saw log production in the Western and Eastern Cape. The mottled yellow to orange bark and clusters of flowers grouped on leafless branchlets inside the tree crown is a common feature of *E. cladocalyx*. A dwarf form from the Eyre Peninsula (var. 'nana'), is a smaller, more spreading tree with a bushier habit, making it more suitable for shelterbelts and garden plantings.

Native: it occurs on the upper slopes and summits of rocky ridgetops or in the proximity of watercourses (Kangaroo Island).

Growing conditions: it grows well in hot, dry conditions and is suited to lower rainfall areas (400 to 600mm). Altitudinal range is from near sea level to 600m.a.s.l. *Eucalyptus cladocalyx* prefers shallow skeletal and solonised brown soils or deep sands.

Allergies: unknown

Growth rate: on the Eyre Peninsula it is a small to medium-sized tree, around 5 to 15m in height and a dbh of up to 0.4m. Trees in the Flinders Ranges and on Kangaroo Island grows up to 35m with a dbh of 1 to 1.5m.

Wood colour: the heartwood is pale yellow-brown with a fine, uniform texture. The wood is marketed as premium timber with a high durability rating and thus suitable for outdoor applications. It is also termite resistant.

Wood odour: unknown

Uses: considered as a good replacement to previously imported tropical Hardwood used in external applications such as Balua, Ekki, Tali, Greenheart etc. It is also well suited for flooring, decking, cladding, posts, poles, general construction, farm timber and joinery. As it polishes to a superb finish, it is highly sought after for decorative applications. The timber can exhibit desirable grain features such as a bee's wing and fiddle-back figure, suitable for the production of high quality furniture and flooring. It is also a source of good firewood and charcoal. However, sapwood is susceptible to attack by lyctid borers. *Eucalyptus cladocalyx* is an excellent source of nectar and produces good quality honey.

General: it is a moderately fast-growing species that can coppice well and is used for windbreaks and shelterbelts. *Eucalyptus cladocalyx*, due to growth and water use, is used for reclamation of saline steeps in low rainfall areas. It also provides habitat and food for a range of native birds, insects and mammals. *Eucalyptus cladocalyx* is not suitable for fodder of sheep, cattle and goats as it is poisonous.



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Please mail any suggestions to Hannél Ham (hamh@basicr.co.za).

SAIF Southern Cape branch news: On Biochar

By Tatenda Mapeto

On a recent postgraduate student field trip, we visited a small scale (less than 20 tons a month) biochar production test site in Sedgefield. The site is being supported by an initiative to clear invasive alien plants in the Gouritz water management area and run by a company called New Carbon.

Presented to us was that Biochar production is a 2 000 year-old practice that converts agricultural waste into a soil enhancer that can hold carbon, boost food security, and increase soil biodiversity. It is created through the heating of organic biomass in a low or no-oxygen environment through a process called pyrolysis. When Biochar is applied to soil, its stability as a carbon material allows it to stay in the soil for many years which in turn limits the production of greenhouse gases from the charred biomass materials if they would have been left to degrade naturally. Additionally, soil functions can be improved as Biochar fortified soils provide internal protective habitats for microbes while the molecular structure of char enhances the soil's ability to hold trace elements needed for plant nutrition. And because of the generally alkaline nature of Biochar it can be applied to acidic soils.

The Biochar idea does sound like a win-win as we have tracts of unproductive invasive plant stands, and a large amount of unutilised biomass from sawmills. The intention is that instead of burning all the available biomass, we can make something good out of it. However as with any feel-good solution, one would want to know if it is just an innovation outcome and if not why haven't we employed it already. On that note the Department of Environmental Affairs conducted a study to assess the feasibility of Biochar production in South Africa.

Key findings indicates that though the Biochar can be produced from most organic materials including wood waste and even animal dung. The success of a SA Biochar industry largely hinges on invasive stands being cleared by the Working for Water programme and using sawmill residues. This leaves an uncertainty in the continual access of feedstock for Biochar plants and thus will not justify large scale investment as yet. Globally, Biochar is an "in thing" with big timber and fibre countries such as New Zealand tagging it as the future of wood. However,

careful directions on its adoption as a mainstream organic product have noted that the absence of clear scientific evidence demonstrating biochar's carbon sequestration potential or its benefits as a soil amendment, thus making it difficult to make definitive decisions at larger scales.

Ongoing research is exploring these considerations and evaluating Biochar opportunities at localised levels. The Sedgefield Biochar production site has even set up an aquaponics vegetable production trials to investigate the soil enhancement and water filtering properties of Biochar.

Whether or not Biochar production will always be limited to the utilisation of waste organic material or if it will become a market for fibre growing industries is a story worth following as it develops. (Photo below by Simon Dooley)



SAIF upcoming events

- SAIF AGM: 17 July 2017, Pietermaritzburg, KZN. Exact venue TBC. For more information contact Corine at saif@mweb.co.za.
- SAIF KZN branch AGM and Quiz Evening: 25 May 2017. ICFR, Pietermaritzburg. Contact Sally at sally.upfold@icfr.ukzn.ac.za.

Would you march for the cause?

By Rob Thompson

Recently, in South Africa, there have been many vociferous protest marches by civil society, over a short period of time. These have been headline events and interest therein locally and abroad was unprecedented.

Interestingly, on 22 April 2017, a march of another calibre took place globally. Even here in South Africa, participants marched for the cause. Whilst this march did not attract as much attention (in fact in many places it went by almost unnoticed by a march weary populace) the cause that it was advocating is arguably one of the most critical to our wellbeing going forward.

So what was it all about?

A non-partisan body of science advocates identified under the epitaph #marchforscience has taken it upon themselves to mobilise global awareness about the importance of science.

An extract from their mission statement further encapsulates their objective thus:- "We unite as a diverse, nonpartisan group to call for science that upholds the common good and for political leaders and policy makers to enact evidence based policies in the public interest. The March for Science is a celebration of science. It's not only about scientists and politicians; it is about the very real role that science plays in each of our lives and the need to respect and encourage research that gives us insight into the world".

I became interested in the organisation and did some reading to find out more. The organisation clearly sees science and associated research, as being critical to health, the environment, food security and overall safety. It iterates the importance of sound and balanced science and scientific principles being built into policy and adopted by society at large. It calls for improved science outreach and education, which principle has likely been the trigger to conduct regular public awareness marches. The advancement of science education and scientific literacy is called for, ultimately leading towards the objective of fostering a diverse and inclusive scientific community.

All of the above commentary resonated with me, given that, as forestry practitioners, we are fortunate to belong to an industry that is highly science based. I would believe that the majority of practitioners hail from a science based education and that much of the work that we undertake involves or is based on, research findings, tested observations or protocols established literally through repeated pre-trials. As a matter of course we would balk at planting a compartment against prescribed practice and would certainly, as first port of call, contact experts to advise on any new disease or pest outbreak. Such is our nature and training.

We take our scientific obligations even further by sharing our findings and observations, both formal and informal, under the guise of field days and seminars and informal talks. The SAIF in fact, plays a major role in this sharing of knowledge between practitioners.

As an industry, deeply enmeshed in matters environmental, we face public scrutiny as a rule. This has, and continues to hone our

adherence to scientific principles. By adopting FSC, PEFC, ISO, Controlled Wood and other certification based programmes, we measure ourselves against established practice, audit for deviances and implement corrective actions as required. This all amounts to science. Whilst many of us are not practicing researchers or academics, we are following paths dictated by solid scientific findings. Our further practical inputs and shared observation enhances existing protocols thereby ensuring that protocols remain current and applicable.

I dare to say that we execute all of the above almost in rote fashion. We hardly think about what we are doing, so attuned are we to our procedures and principles. It would therefore be refreshing for us to pause and reflect for a while on the positive role that science is indeed playing in our lives. Such reflection ought to emphasise to us as well, just how fortunate we are to have a science based background and the many doors that this has opened to us.

Whilst reflecting on forestry's acceptance of science, allow your thoughts to drift across to the converse spectrum where a sound scientific base appears absent. There are many examples of this. The States' pursuit of natural gas by means of fracking, environmental abuses in the mining arena, land development for the wrong purposes and executed in the wrong manner, poor farming practices, poor water conservation and legislation etc. A more insidious arena where there is an obvious lack of science is in our education system. We literally need more kids to be exposed to science rather than the softer subjects. Our future generation needs to be extending into science and furthering the guiding principles across all disciplines and which are currently so lacking.

I am so glad that I encountered #marchforscience. It has awakened an urge to celebrate science and to share the true meaning of science. We don't necessarily have to have an array of high qualifications behind our names. We do however need to be equipped to understand the power of observation and record and to practice this in whatever we are doing.

Forestry practitioners are amongst the privileged few with a science based background. Use it well. Celebrate it. Make known your concerns about poor practices that you come across. Substantiate reasons for your concerns and pass them on to the appropriate authorities. Do what you can to encourage your own community to embrace science as a first choice. Give a talk at a school or support an SAIF outreach event. Write an article about something that you have observed and submit to a publication or website. This very newsletter can use your inputs!

I am not calling on you to become radical science activists! My simple plea would be that you respect what you have, the "authority" that this gives you and to encourage others to achieve similar or more. Share your analytical ability and observations by being an active citizen and contributing on appropriate platforms.

The more I think about this the more I feel that science advocacy is not only a necessity, but an obligation.

SAIF 2017 photo competition

A reminder of the SAIF photo competition which is again taking place in 2017. The top 13 photos will be used to compile the 2018 SAIF calendar. The prizes are being sponsored by Stihl and are as follows:

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|---------------------------------------|----------|
| 1. STIHL RE 88 High Pressure Washer | R2435.40 |
| 2. STIHL HSA 25 Cordless Shrub Shears | R2145.00 |
| 3. STIHL SE 62 Vacuum | R2079.00 |

The rules of the competition can be found on the SAIF website and will be included in the June issue of the newsletter again. Below are images of the products that Stihl has generously donated as prizes.

STIHL®



KZN Branch Annual Quiz Evening

The KwaZulu–Natal Branch of the SAIF invites you (or actually we challenge you) to take part in our Annual Quiz Evening for 2017. It's time once again to find out where the real brains lie in the Industry...

The KZN Branch of the SAIF is hosting a quiz evening and all are welcome. The format is much the same as before. You can enter as a team of between 4–6 members, and questions will be asked of the team, so no pressure on the individual. The content of the questions is mostly general knowledge with a few forestry–related ones just to check who really knows their field, and then some really obscure ones just to make everyone feel “doff” There are great prizes up for grabs to the winning team and consolation prizes for those who try hard and show potential...

- Date: Thursday 25 May 2017
- Venue: ICFR, Pietermaritzburg
- Time: 17h45 (straight after the AGM)

What's on offer?

- A test of your brain power
- Lots of laughs
- Some healthy team rivalry
- Spot prizes
- A prize for the winning team and
- Drinks and light snacks to stimulate the brainwaves.

To enter, please send an e–mail with details of the team name and team captain, to Sally Upfold (sally.upfold@icfr.ukzn.ac.za) by 19 May.

#YAFF Awards

DAFF will be hosting the Youth in Agriculture, Forestry and Fisheries Awards on the 30 June 2017 and would like to invite the youth in forestry organisations to participate in the awards. Due to few entries received for Forestry; the closing date has been extended to 08 May 2017.

The new closing date is only for Forestry to ensure forestry youth do not miss out on this opportunity. Please see the documents attached to the email for the requirements and application process.

2017 South African Women in Science Awards

The Department of Science and Technology (DST) calls for nominations for the 2017 South African Women in Science Awards (WISA). The awards recognise and reward excellence by women scientists and researchers, and profile them as role models for younger women. The awards will be made to women who are South African citizens or permanent residents.

The theme for the 2017 WISA is Women's economic empowerment in the changing world of work, which is the 2017 priority theme for the United Nations Commission on the Status of Women (UNCSW).

Awards in the distinguished woman and distinguished young woman researcher categories will be made for research that responds to the theme in the fields of Natural and Engineering Sciences, and Humanities and Social Sciences. However, the DST Fellowships and TATA Scholarships are not restricted to the theme.

Awards will also be made to a special category within the theme which will award research and innovation (R&I) leading to demonstrable contribution in advancing women's economic empowerment in the world of work.

The 2017 WISA will be presented on 17 August 2017 as part of the Department's celebration of Women's Month. The awards will be made in various categories. Nominations and applications on the relevant form should reach the Department of Science and Technology by **Friday, 26 May 2017**. No late submissions will be accepted. For more information contact Mr Thembinkosi Magasela at 012 843 6338 or Thembinkosi.Magasela@dst.gov.za. Also email Corine at saif@mweb.co.za.

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May 2017 birthdays

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|--------|-------------------|--------|---------------|
| 02-May | L.J.B. DU PLESSIS | 18-May | C.A. WALTON |
| 04-May | D.T. PRIEST | 19-May | K. VON GADOW |
| 05-May | A.B. BIJL | 20-May | B. SLIPPERS |
| 05-May | M.B. GUSH | 22-May | S.K. NXUMALO |
| 05-May | A.S. OLIVIER | 22-May | P. SEOKE |
| 05-May | K. SCHWEGMAN | 24-May | B. DU TOIT |
| 05-May | C. SUMMERSGILL | 24-May | W.K. ESLER |
| 06-May | K.R. CAZALET | 25-May | J.T. WALLIS |
| 06-May | D.A. EVERARD | 26-May | E.H. GEVERS |
| 07-May | H.M. PRETORIUS | 27-May | W.H.F. HINZE |
| 12-May | R.C. FERREIRA | 27-May | P.L. KIME |
| 14-May | D. DREW | 27-May | T. NAIDOO |
| 15-May | D.E. KEYSER | 28-May | H. PIENAAR |
| 15-May | D.C. LE MAITRE | 29-May | A.J.L. BOLD |
| 16-May | G.R.F. GERISCHER | 30-May | N.L. HATTINGH |
| 16-May | T.P. MBATHA | 31-May | G.M. SIMPSON |
| 17-May | C.B. WESSELS | | |